

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Neville John HAZELL, et al.

Attorney Docket Q62781

Appln. No.: not yet assigned

Group Art Unit: Not yet assigned

Confirmation No.: not yet assigned

Examiner: Not yet assigned

Filed: January 30, 2001

For: **OPTICAL DISPERSION COMPENSATION**

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

**Please enter the following amended claims:**

4. (Amended) A method according to claim 1, in which dispersion compensation is provided by means of a number of lengths of dispersion compensating optical fibre.

7. (Amended) A method according to claim 5, in which the dispersion compensating element is a photorefractive element or a diffraction grating.

8. (Amended) A method according to claim 1, further comprising the step of: imposing a uniform delay to a particular wavelength band to compensate for relative dispersion between the particular wavelength band and a second different wavelength band.

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11. (Amended) A device according to claim 9, in which the dispersion compensation element comprises a length of dispersion compensating optical fibre.

12. (Amended) A device according to claim 9, further comprising an optical coupler arranged to feed an optical signal received at an optical input to an optical path having a dispersion compensation element, the dispersion compensation element being adapted to apply dispersion compensation to a number of channels within a limited bandwidth and reflect signals within that bandwidth to an optical output of the optical coupler.

14. (Amended) A device according to claim 9, in which the dispersion compensation element is a diffraction grating.

15. (Amended) A device according to claim 9, in which the dispersion compensation element is a photoreflective element.

16. (Amended) A device according to claim 9, in which the dispersion compensation device further comprises an optical reflector coupled to the dispersion compensating element to reflect optical signals outside of the predetermined bandwidth to the optical output of the optical coupler.

17. (Amended) A device according to claim 9, further comprising a delay element to provide inter-band dispersion compensation.

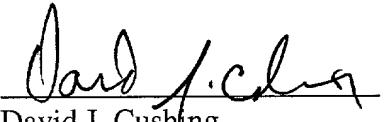
19. (Amended) A dispersion compensation device according to claim 9 comprising a housing having at least one spool of dispersion compensation fibre arranged axially within the housing so as to provide a passage extending along a length of the housing through the core of the spool.

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**REMARKS**

Entry and consideration of this Amendment are respectfully requested.

Respectfully submitted,

  
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Date: January 30, 2001

**APPENDIX**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**The claims are amended as follows:**

4. (Amended) A method according to [any preceding claim]claim 1, in which dispersion compensation is provided by means of a number of lengths of dispersion compensating optical fibre.

7. (Amended) A method according to claim 5 [or 6], in which the dispersion compensating element is a photorefractive element or a diffraction grating.

8. (Amended) A method according to [any preceding claim]claim 1, further comprising the step of:

imposing a uniform delay to a particular wavelength band to compensate for relative dispersion between the particular wavelength band and a second different wavelength band.

11. (Amended) A device according to [claims 9 or 10]claim 9, in which the dispersion compensation element comprises a length of dispersion compensating optical fibre.

12. (Amended) A device according to [any of claims 9 to 11]claim 9, further comprising an optical coupler arranged to feed an optical signal received at an optical input to an optical path having a dispersion compensation element, the dispersion compensation element being adapted to apply dispersion compensation to a number of channels within a limited bandwidth and reflect signals within that bandwidth to an optical output of the optical coupler.

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14. (Amended) A device according to [any of claims 9 to 13]claim 9, in which the dispersion compensation element is a diffraction grating.

15. (Amended) A device according to [any one of claims 9 to 13]claim 9, in which the dispersion compensation element is a photoreflective element.

16. (Amended) A device according to [any one of claims 9 to 15]claim 9, in which the dispersion compensation device further comprises an optical reflector coupled to the dispersion compensating element to reflect optical signals outside of the predetermined bandwidth to the optical output of the optcal coupler.

17. (Amended) A device according to [any of claims 9 to 16]claim 9, further comprising a delay element to provide inter-band dispersion compensation.

19. (Amended) A dispersion compensation device according to [any of claims 9 to 18]claim 9 comprising a housing having at least one spool of dispersion compensation fibre arranged axially within the housing so as to provide a passage extending along a length of the housing through the core of the spool.